shock to this writer who likes to believe that published information on topics such as these becomes known to practicing physicians and influences their patient care decisions. The findings in this paper therefore raise some important questions, particularly in the present environment of medical practice, where physicians are expected to present state-of-the-art information to patients for shared decision making and informed consent for whatever procedure is to be undertaken.

Assuming the physicians in this study were considered to be competent (and there is no reason to suspect they were not), how does one account for such a wide lack of knowledge of existing published information? Perhaps our elaborate mechanisms for disseminating accurate medical information to physicians are not working as well as they should, or perhaps the information itself may not always have been thought to be accurate. After all, different case studies often give different rates for complications or deaths. Perhaps the data may not be considered to be current or specific to the situation where it is to be used, and therefore not relevant. It is certainly true that most physicians have been trained to be critical of experimental studies, particularly when the results do not seem to fit with their own professional experience. And all are aware that any individual patient may be anywhere along a curve of statistical probability. But none of these possible explanations seems fully to account for the wide lack of knowledge of existing information exposed in Kronlund and Phillips's study. There is much food for thought in all this, particularly as patient care evolves toward an ever more exact science, with practicing physicians expected to be authoritative for that science before their patients and the public.

MSMW

Stress and Coping in Internal Medicine Residency

ALTHOUGH THE HANDSOME and tireless intern in his scrub suit has been the subject of many romantic portrayals, there has recently been more serious attention in both the lay and medical press to the rigors of residency training and its effect on house officers. The article by Wolfe and Jones in this issue focuses on problems they have noted in the areas of professional socialization, conflicts between personal and professional life, "role strain," pregnancy and the role of the spouse. As the program they describe has a predominance of women, the authors feel they may be observing "gender differences in how residents are affected by and respond to certain problems in residency training." However, I question the validity and the productiveness of labeling difficulties experienced by women trainees as "women's problems." The exhaustion, uncertainty, fear and personal deprivation associated with residency affect both men and women. The culture of medicine remains predominantly male but that does not legitimize the labeling of the coping responses of women trainees as abnormal simply because they are different from the responses of men. The fundamental problem from which the maladaptive coping responses of men and women flow is the stress associated with residency training; thoughtful consideration of the origins of this stress is more likely to be fruitful for trainees of both sexes.

Training stress is a complex and incompletely described phenomenon. Some hardships of residency training are dramatic and readily identified; these include the extraordinary time demand and consequent physical and emotional exhaustion, the intense and sudden responsibility for life-or-death decisions and the tremendous amount of information to be mastered. Other aspects of residency training are perhaps equally stressful but less often appreciated. The daily work of a house officer, particularly an intern, is in large part unexpectedly monotonous. Teaching is unstructured and learning unpredictable. Ethical dilemmas in patient care are ubiquitous and typically are not explicitly addressed or resolved. The climate of a residency program is often inhospitable or overtly hostile to expressions of personal or professional distress. The list could be extended almost indefinitely by anyone who has recently completed an internship. Some of these hardships are inherent in the nature of medical work while others reflect oversight or traditions of training. In considering possible remedies, it is useful to view stress as originating in either the content, the process or the atmosphere of medical training. Once the source of stress has been firmly located, possible solutions tend to suggest themselves.

Challenges arising from the fundamental *content* of medicine relate to the overwhelming amount of medical knowledge, to the high level of uncertainty surrounding many major decisions, to the burden of responsibility for the well-being of other persons and to the ethical tensions frequently associated with this responsibility. Efforts to reduce training stress by direct manipulation of these fundamental attributes is unlikely to be effective or beneficial. However, explicit discussion of these issues in residents' reports, morbidity and mortality and attending rounds could promote a maturing understanding of the nature of medical practice in parallel with the development of technical expertise that already occurs during residency. Rather than suggesting that the best residents always know the right course of action, discussions should support the accurate identification of one's limitations and appropriate consultation. The pain, sadness, uncertainty and occasional error inherent in medicine should not be denied. Ethical tensions in the care of patients should be sought out and thoughtfully discussed. All of this would best be accomplished as an integral part of training by teachers who are also respected for technical competence. As these issues are part of medical practice, it is logical and natural that their discussions should be undertaken by practitioners in the course of caring for patients.

The challenges of the *process* of medical training include the extraordinary time demand and consequent exhaustion, the personal deprivation and family stress resulting from a workweek that is three times longer than that enjoyed by "normal people," the interpersonal demands of frequent rotation and team changes and the unpredictable nature of clinical teaching. These stresses reflect the traditions and habits of residency more than the fundamental nature of medical practice. Whether they should all be preserved is open to question. Recognizing the central importance of residents to the experience of everyone on a team suggests that more formal attention to the development of teaching and leadership skills could decrease interpersonal strain and increase team learning and the satisfaction that goes with it. Call schedules of every fourth night or better, alternating ward and consultation or clinic months and cross-coverage by a night float all offer the potential of humanizing the experience for residents without impairing learning or patient care.

The *atmosphere* of medical training may promote healthy or maladaptive responses to the challenges of medical training. Programs may give lip service to the idea that omniscience is not a training goal and that personal satisfaction should parallel professional development. But the selection of chief residents often appears to reflect a belief that successful residents subordinate personal life to profession, know all and never experience distress, uncertainty or conflict. A training program that by its actions supports unrealistic goals among house officers will increase training stress. A healthy residency environment accepts the accurate self-recognition of limits to knowledge and skill while motivating further learning, encourages the exploration of ethical issues involved in clinical medicine, actively promotes the acquisition of teaching and leadership skills in this residency, values personal development along with personal maturation and permits rather than penalizes expressions of training discomfort.

Having proposed this framework for considering residency stress, is there any reason to think that the challenges of medical training are more burdensome for women than for men? Before addressing this question directly, I wish to emphasize that difficulties experienced by women in training may reflect structural and institutional problems rather than "women's problems" per se. The fact that women may use particularly "feminine" coping techniques such as crying or particularly "masculine" techniques such as aggressiveness or cynicism does not necessarily indicate a more stressful experience but rather that their coping behaviors are more apparent in an environment where men have set the norms.

There is no reason to believe that women find the fundamental *content* of medical training more taxing than men. No one suggests that the ability to acquire a fund of medical knowledge, to shoulder life and death responsibility for patients and to deal with the ethical content and uncertain nature of many medical decisions is a sex-linked trait. The *process* of medical training is more problematic. Specifically, a 110-hour workweek can reasonably be expected to be burdensome to a woman with substantial commitments at home and a traditional family structure. Separation from small children for 36 hours at a time is wrenching. However, I am disinclined to consider the conflict between personal and professional commitments a problem for women alone and am more interested in the fact that men have for so long put up with "the myth of the heroic male professional." A well-developed personal life with inclination, time and energy for exercise, entertainment and companionship are presumably no less important for men than for women. Women do seem to experience increased conflict between personal and professional commitments in association with marriage and particularly with having children. I would again raise the notion that perhaps male physicians should have felt this conflict more strongly all along. Even pregnancy during residency, obviously a condition that is a predominant concern to women residents, has been accommodated in some training programs without difficulty. In our program seven women have had eight pregnancies without untoward disruption of the residents' schedules or individual training.

I suggest, finally, that it is in the category of *atmosphere* of medical training that women trainees may experience the most difficulty. Women are different from men and can be expected to cope differently and ultimately to practice somewhat differently. To the extent that men's behavior is considered normal, women will experience some unique training and practice discomforts. Rather than focusing on the reactions of one group of trainees, it seems to me far more productive to consider stress in training as the fundamental problem. In this way perhaps the residency experience can be reformed to the benefit of both men and women.

MOLLY COOKE, MD
Assistant Clinical Professor
Department of Medicine
San Francisco General Hospital Medical Center
University of California, San Francisco,
School of Medicine